

REMARKS

Claim 20 has been cancelled without prejudice to the right to file an appropriate continuing application directed thereto.

It is respectfully submitted that the objection to claims 1, 16 and 18 can be withdrawn in light of the substitution of the word "obtained" as suggested by the Examiner.

Claims 1-8, 11-18 and 21-23 were rejected based on 35 U.S.C. §103 over Groth while claims 1-3, 5-8, 10-18 and 21-23 were rejected based on 35 U.S.C. §103 over Fukushima and claims 7-8 rejected over Fukushima in view of Vorse. It is respectfully submitted that these rejections are not tenable and should be withdrawn.

With respect to both Groth and Fukushima, the Office Action admits that neither reference teaches or suggest hydrolyzing the first and second silanes to form separate sols and then mixing the sols together. To overcome this deficiency, the Office Action asserts that it would be obvious that hydrolyzing the silanes separately and mixing them together would have worked equally well as hydrolyzing them together, and would have the same effects. Applicant previously challenged this assertion and pointed out that this is a statement of a conclusion and not a statement of fact. No factual basis for the statement had been advanced nor was any apparent (other than gross speculation, which, of course, is not permissible). Obviousness cannot be predicated on the unknown. *In re Newell*, 13 USPQ2d 1248, 1250 (Fed. Cir. 1989). Silence is not a substitute for an adequate disclosure of facts from which a conclusion of obviousness may justifiably follow. *In re Burt*, 148 USPQ 548 (CCPA 1966).

This situation remains true. The current Office Action does not identify any factual basis for the conclusion. Instead, it is argued that any conclusion of obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. In reply, Applicant respectfully submits that there is an absolute requirement for a factual basis. "The mere fact that the references cited by the examiner may be modified does not allow the examiner to meet his or her burden [of establishing a *prima facie* case] absent a suggestion in the cited art of the desirability of the modification." *In re Fritch*, 23 USPQ2d 1780 (Fed. Cir. 1992). The record is barren of such a suggestion.

Beyond the foregoing, Applicant pointed out that the CCPA had occasion to observe in the case of *In re Freed*, 165 USPQ 570, 572 (1970) that

"... it seems more logical and reasonable to infer that one teaching a chemical reaction process would set out the least number of reactions thought necessary to accomplish the desired objective. Thus, one skilled in the art who reads the teaching would have to presume that if the reactants were not combined in the manner shown, some adverse side reaction or no reaction at all would occur."

The presumption "that if the reactants were not combined in the manner shown, some adverse side reaction or no reaction at all would occur" cannot be dismissed by the "reasoning" (albeit not set forth and also admitted having been done by hindsight) advanced to the current Office Action.

A *prima facie* rejection has not been made.

The current Office Action continues the allegation that it would be obvious to one of ordinary skill in the art at the time the invention was made that the amount of one silane with respect to the other would have been determined through routine experimentation in order to optimize the effects that these inorganic monomers would

have in a composition. It is asserted that increasing the first silane would increase hardness and weather resistance whereas increasing the second silane would increase polymerization between the inorganic sol and organic component thereby increasing adhesion of the coating to the substrate. The factual basis for these assertions is still not set forth nor is the same apparent. The apparent internally inconsistency - increasing both the first and second silanes means that the ratio between the silanes would not change- has not been explained. Instead, the Office Action seeks to place a burden on the Applicant to show criticality, citing MPEP §2144.05, section IIA. But that section presumes that what is involved is the "optimization" of some aspect of a known process described in a reference (see the citation to *In re Aller*) and that situation is not present here. The references do not teach separate sol preparations followed by mixing, as the Examiner has acknowledged. Thus, not only does the process of the references have to be modified in a manner which is not taught or suggested and the "optimize" the modified method. Motivation to do so is essential and is absent. The rejection is therefore untenable.


In light of the failure to establish a *prima facie* rejection, Applicant has no obligation to show that hydrolyzing the monomers separately and then mixing them has advantages over hydrolyzing them together. Although unnecessary, such a showing is submitted herewith. It shows that a coating prepared using the procedure of separate sol preparation follow by combination resists damage when a fingernail is drawn aggressively across it whereas a coating made by joint sol preparation is readily damaged when a fingernail is drawn across it. Accordingly, even if a *prima facie* rejection had been made (which is denied), an unobvious result has been shown and withdrawal of the rejections would be in order.

The deficiencies in Fukushima with respect to claim 7 and 8 are not overcome by additional reliance on the Vorse reference. The latter reference has been cited only to show the use of tetraethoxysilane but not to otherwise overcome the deficiencies in the primary reference.

In light of all of the foregoing considerations, it is respectfully submitted that this application is now in condition to be allowed and the early issuance of a Notice of Allowance is respectfully solicited.

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Respectfully submitted,

By 

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